



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,953	09/12/2006	Mitsuhiro Kurano	114116.00031	8391
21324 7590 10/15/2009 HAHN LOESER & PARKS, LLP One GOJO Plaza Suite 300 AKRON, OH 44311-1076			EXAMINER ROBINSON, DANIEL LEON	
			ART UNIT 3742	PAPER NUMBER
			NOTIFICATION DATE 10/15/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents@hahnlaw.com
akron-docket@hotmail.com

Office Action Summary

Application No.

10/597,953

Applicant(s)

KURANO, MITSUHIRO

Examiner

DANIEL L. ROBINSON

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 9, 13, 16 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 11-12, 14-15, 17, 19 and 22-23 is/are rejected.
- 7) ☒ Claim(s) 7, 10 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Response to Amendment

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8, 11-12, 14-15, 17, 22 and 23 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Helmig(U.S.Pat.5,563,352).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Helmig in view of Sheehan(WO 98/07505). Helmig discloses a gas concentration and injection system for chromatographic analysis or organic trace gases that shows all the features of the claimed invention but fails to explicitly show an electrode. Sheehan discloses a method and apparatus for improved electrospray analysis the pparatus for low pressure electro-spray to delivery analyte to a detection device comprises: (a) a capillary tube (10) for introducing a liquid sample; (b) a first chamber (1) for receiving the liquid sample which includes a first wall having a vacuum seal (13) in which the capillary tube

is situated and a second wall, the chamber being maintained at a pressure substantially less than atmospheric pressure; (c) an electrode or cylindrical tube (11) co-axial with the capillary tube for maintaining a high electric potential difference between the liquid sample within the capillary tube and the second wall so that the surface of the liquid sample is distorted at the capillary tube outlet into a single electro-spray cone-jet; (d) a heating means for heating the liquid sample within the capillary tube to prevent the freezing of the electro-spray cone-jet exiting the capillary outlet; (e) a mechanical, electrostatic or magnetic steering means to direct the cone-jet in a well defined path; (f) an aperture located in an entrance lens (21) which together with an additional focussing lens (20) comprises the second wall of the first chamber so that the liquid jet and any resulting highly charged droplets from the break-up of the liquid jet are emitted from the first chamber; (g) a second chamber (2) adjacent to the first chamber maintained at substantially less than atmospheric pressure and at a higher pressure than the first chamber the second chamber including the second wall of the first chamber and having an aperture (29) in a skimmer lens (22) through which sample is emitted and in which liquid and analyte evaporate into the gas phase so that the analyte may be received, via ion optics, by a detection device such as a mass analyser (34); and (h) a cartridge (26) embedded in the second chamber wall (25) for heating the second

chamber to facilitate the evaporation of the highly charged droplets. It would have been obvious for one of ordinary skill in the art at the time of the claimed invention to use an electrode in a tube as taught by Sheehan with the device of Helmig so as to create a high electric potential.

Allowable Subject Matter

Claims 7, 10 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL L. ROBINSON whose telephone number is (571)272-4788. The examiner can normally be reached on m-f 5:30-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu B Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

dlr

/Daniel L Robinson/

Primary Examiner, Art Unit 3742